

THE DRAWING AMENDMENTS:

Amendments to Figure 3 are attached to this Reply. A marked-up version of Figure 3 including the designation “Prior Art” is attached at Appendix A. A clean replacement sheet for Figure 3 including the “Prior Art” designation is attached at Appendix B.

REMARKS

Claims 1-16 are pending in the application. Claims 1 and 3 are amended above to incorporate a feature of claim 3 into claim 1. Figure 3 is also amended to designate it as "Prior Art". No new matter has been added to the application by way of these amendments.

I. THE DRAWING OBJECTION

The examiner objected to Figure 3 because it does not include the legend "Prior Art".

The examiner's objection is overcome by amending Figure 3 to include the requested "Prior Art" legend.

II. TRAVERSE OF THE ANTICIPATION REJECTION

Claims 1-11 and 13 stand rejected by the examiner for anticipation by Brastad et al. (USP 4,230,924).

Claims 1-11 and 13 are novel at least because Brastad et al. fails to disclose several features of independent claim 1. Claim 1 is amended above to limit the characteristic dimension of the patch elements to no greater than about 500 μ m. This amendment causes independent claim 1 to be novel because Brastad et al. fail to disclose a characteristic dimension for their metal patch elements within this claimed limit. On the contrary, and as the examiner acknowledged in paragraph 3 of the Detailed Action, Brastad et al. teach that their metallic pads or islands range from about 793.75 to about 19050 μ m on a side (claim 9 of the reference). Clearly the lower limit of this range is substantially greater than about 500 μ m as now claimed in independent claim 1.

The amended patch element size of claim 1 is not a mere arbitrary choice of maximum patch size but is derived, as discussed in the first paragraph on page 4 of the application, in order to ensure that the material will retain substantial transparency to microwave radiation notwithstanding being in contact with a foodstuff to be heated as the close proximity of the foodstuff to the material tends to negatively influence the transparency of the latter by virtue of the high relative permittivity of the foodstuff. Brastad et al. show in Figure 2 their material 24 closely wrapping fish stick 22 and even with the metallic coating 28 on the inside of the packaging in contact with the foodstuff. However, Brastad et al. failed to appreciate its

significance for microwave transparency, so neither could it be obvious to one skilled in the art from the teachings of Brastad et al. to reduce the characteristic patch dimension as presently claimed.

Independent claim 1 is also patentable because Brastad et al. do not address the features of claim 1 of the application that the metal patch elements define a frequency selective surface **adapted to reflect thermal infrared radiation** and that the combined emissivity of the substrate and patch elements is no greater than about 0.8 in the thermal infrared waveband. The examiner admits that Brastad et al. fail to disclose these claim features but asserts the features are inherent in the Brastad et al. structures. However, the examiner's "inherency" argument is no longer valid because, as shown above, the size of Brastad et al.'s metal patch elements is not within the range presently claimed.

For each of the reasons above, independent claim 1 and claims 2-11 and 13 – which all depend from claim 1 – are novel, nonobvious and patentable.

III. TRAVERSE OF THE OBVIOUSNESS REJECTIONS

The examiner rejected claims 12 and 14 for being obvious over Brastad et al. in view of Walters (USP 5,256,846). The examiner also rejected claim 15 for being obvious over Brastad et al. in view of Walters and in further view of Yializis (USP 6,106,627). Finally the examiner rejected claim 16 for being obvious over Brastad et al. in view of Walters and further in view of Aindow et al. (USP 6,171,429).

Claims 12 and 14-16 are non-obvious and patentable at least by virtue of their dependence upon claim 1. Claim 1 is patentable over the prior art as discussed in Section II above.

CONCLUSION

Claims 1-16 are pending in the application and are allowable over the prior art as set forth above. Favorable reconsideration and allowance of all pending application claims is, therefore, courteously solicited.

Respectfully submitted,

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APPENDIX A

(Marked Up Sheet Showing Requested Changes To Figure 3)

ADD "PRIOR ART"
LEGEND

Fig.3. (PRIOR ART)

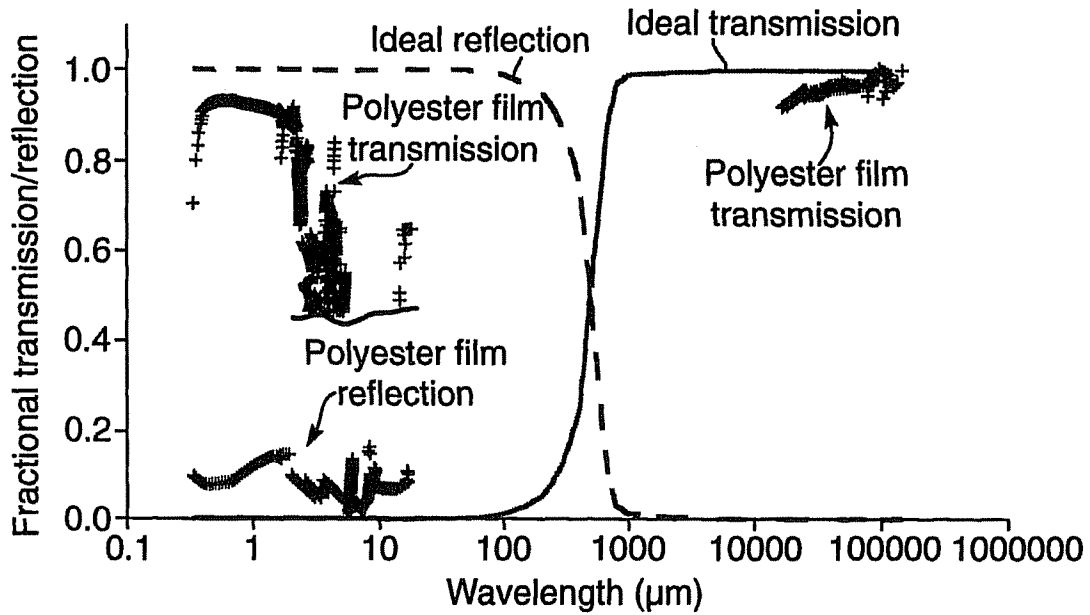
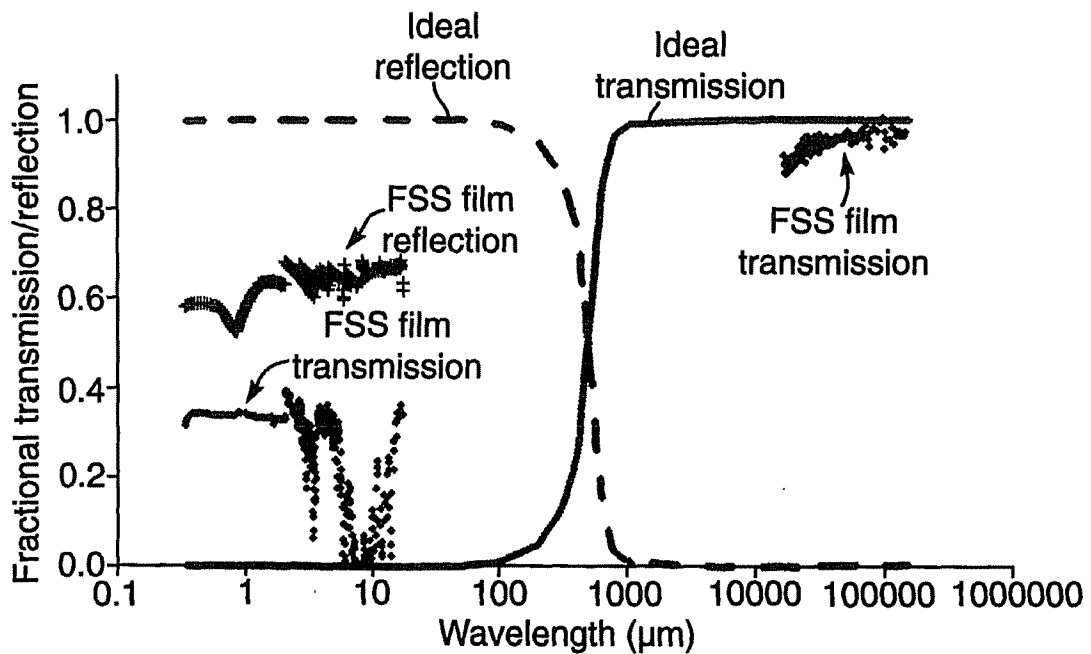


Fig.4.



APPENDIX B

(“Replacement Sheet” For Figure 3)